**To:** Stapleton, Jeff[jeff.stapleton@kalmancoinc.com]
**From:** Gravatt, Dan
**Sent:** Fri 3/15/2013 12:14:49 PM
**Subject:** RE: St. Louis Survey

Jeff, the description was taken from the ROD for West Lake Landfill OU1, May 2008, with some edits and a few post-2008 events added.

Daniel R. Gravatt, PG

US EPA Region 7 SUPR/MOKS

11201 Renner Boulevard, Lenexa, KS 66219

Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

**From:** Stapleton, Jeff [mailto:jeff.stapleton@kalmancoinc.com]
**Sent:** Thursday, March 14, 2013 8:32 AM
**To:** Gravatt, Dan
**Subject:** RE: St. Louis Survey

Dan,

We've used your description in our report and would like to cite the reference. My assumption is that this comes from a CERCLA document of some sort. Do you have a reference we can include in our report.

Thanks,

Jeff

**From:** Gravatt, Dan [mailto:Gravatt.Dan@epa.gov]
**Sent:** Thursday, February 21, 2013 8:49 AM
**To:** Jefferson, Matthew; Stapleton, Jeff
**Cc:** Curry, Tim
**Subject:** RE: St. Louis Survey

Jeff and Tim, here is the info on West Lake. Tim, the list of products you mention below sounds appropriate for what we're trying to do at West Lake.

Thanks,

Dan

West Lake Landfill Operable Unit 1

Bridgeton, Missouri

MOD079900932

The West Lake Landfill Site is on a parcel of approximately 200 acres located in the northwestern portion of the St. Louis metropolitan area. It is situated approximately one mile north of the intersection of Interstate 70 and Interstate 270 within the limits of the city of Bridgeton in northwestern St. Louis County. The Missouri River lies about two miles to the north and west of the Site. The Site is bounded on the north by St. Charles Rock Road and on the east by Taussig Road. Old St. Charles Rock Road borders the southern and western portions of the Site. The Earth City Industrial Park is adjacent to the Site on the west. The Spanish Village residential subdivision is located less than a mile to the south and a trailer park is less than a mile to the southeast.

The Site consists of the Bridgeton Sanitary Landfill (Former Active Sanitary Landfill) and several inactive areas with sanitary and demolition fill that have been closed. The address of the Bridgeton Landfill is 13570 St. Charles Rock Road. Land use at the site and the surrounding areas in Earth City is industrial.

Other facilities which are not subject to this response action are located on the 200-acre parcel

including concrete and asphalt batch plants, a solid waste transfer station, and an automobile repair shop.

The Site was used agriculturally until a limestone quarrying and crushing operation began in 1939. The quarrying operation continued until 1988 and resulted in two quarry pits. Beginning in the early 1950s, portions of the quarried areas and adjacent areas were used for landfilling municipal solid waste (MSW), industrial solid wastes, and construction/demolition debris. These operations were not subject to state permitting because they occurred prior to the formation of the Missouri Department of Natural Resources (MDNR) in 1974. Two landfill areas were radiologically contaminated in 1973 when they received soil mixed with leached barium sulfate residues.

The barium sulfate residues, containing traces of uranium, thorium, and their long-lived daughter products, were some of the uranium ore processing residues initially stored by the Atomic Energy Commission (AEC) on a 21.7-acre tract of land in a then undeveloped area of north St. Louis County, now known as the St. Louis Airport Site (SLAPS), which is part of the St. Louis Formerly Utilized Sites Remedial Action Program managed by the U.S. Army Corps of Engineers.

In 1966 and 1967, the remaining residues from SLAPS were purchased by a private company for mineral recovery and placed in storage at a nearby facility on Latty Avenue under an AEC license. Most of the residues were shipped to Canon City, Colorado, for reprocessing except for the leached barium sulfate residues, which were the least valuable in terms of mineral content, i.e., most of the uranium and radium was removed in previous precipitation steps. Reportedly, 8,700 tons of leached barium sulfate residues were mixed with approximately 39,000 tons of soil and then transported to the Site. According to the landfill operator, the soil was used as cover for municipal refuse in routine landfill operations. The data collected during the Remedial Investigation (RI) are consistent with this account.

The quarry pits were used for permitted solid waste landfill operations beginning in 1979. In August 2005, the Bridgeton Sanitary Landfill (Former Active Sanitary Landfill) stopped receiving waste pursuant to a restrictive covenant with the Lambert - St. Louis Airport to reduce the potential for birds to interfere with airport operations.

EPA placed the Site on the Superfund National Priorities List (NPL) in 1990. In 1993, EPA entered into an Administrative Order on Consent (AOC) with the potentially responsible parties

(PRPs) for performance of the OU 1 RI/Feasibility Study (FS). Pursuant to the requirements of that order, the PRPs submitted for EPA's review and approval an RI which detailed the findings of extensive sampling and analysis on the area of OU 1 and the surrounding area. Following the RI, the PRPs submitted for EPA's review and approval an FS which evaluated the various remedial alternatives for OU 1 consistent with the requirements of the AOC and taking into account the requirements of CERCLA and the NCP. In addition, the state of Missouri was provided an opportunity for review and comment on these documents. The FS was approved in early 2006.

The proposed plan was released in June 2006, and the first public comment period ran until December 2006. The second public comment period ran in early 2008 after extensive HQ review of the proposed plan, and the ROD was signed in May 2008. A vocal minority of St. Louis residents sent two letters to EPA HQ in 2009 requesting that HQ re-evaluate the Region's decision. HQ issued a one-page memorandum after the first letter, but in December 2009 decided to undertake a Supplemental Feasibility Study (SFS) after the second letter. The SFS was completed in December 2011.

The Site is divided into the following areas:

• Radiological Area 1 – This area was part of the landfill operations conducted prior to state regulation. Approximately 10 acres are impacted by radionuclides at depths ranging up to 15 feet. The radionuclides are in soil material that is intermixed with the overall landfill matrix consisting of municipal refuse.

• Radiological Area 2 – This area was also part of the unregulated landfill operations conducted prior to 1974. Approximately 30 acres are impacted by radionuclides at depths generally ranging to 12 feet, with some localized occurrences that are deeper. The radionuclides are in soil material that is intermixed with the overall landfill matrix consisting mostly of construction and demolition debris.

• Buffer Zone/Crossroad Property – This property—also known as the Ford Property—lies west of Radiological Area 2 and became surficially contaminated when erosion of soil from the landfill berm resulted in transport of radiologically contaminated soils from Area 2 onto the adjacent property.

• Closed Demolition Landfill – This area is located on the southeast side of Radiological Area 2. This landfill received demolition debris. It received none of the radiologically contaminated soil. It operated under permit with the state and was closed in 1995.

• Inactive Sanitary Landfill – This landfill is located south of Radiological Area 2 and was part of the unregulated landfill operations conducted prior to 1974. The landfill contains sanitary wastes and a variety of other solid wastes and demolition debris. It received none of the radiologically contaminated soil.

• Former Active Sanitary Landfill – This municipal solid waste landfill—known as the Bridgeton Landfill—is located on the south and east portions of the Site. The landfill is subject to a state permit issued in 1974. This landfill received none of the radiologically contaminated soil. This landfill ceased operation in 2005 and is the cell that is currently on fire.

The Site has been divided into two OUs. OU 1 consists of Radiological Area 1 and Radiological Area 2 (Areas 1 and 2) and the Buffer Zone/Crossroad Property. OU 2 consists of the other landfill areas that are not impacted by radionuclides, i.e., the Closed Demolition Landfill, the Inactive Sanitary Landfill, and the Former Active Sanitary Landfill.

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**From:** Jefferson, Matthew
**Sent:** Wednesday, February 20, 2013 5:57 PM
**To:** Stapleton, Jeff
**Cc:** Curry, Tim; Gravatt, Dan
**Subject:** RE: St. Louis Survey

Hi Jeff,

There are two separate Superfund sites being surveyed. The one with the flight pattern shaped like a box to the west of the St. Louis Lambert airport is called Westlake Landfill. The other site to east of the St Louis Lambert airport with the flight pattern shaped like a "S" which follows Coldwater Creek and it is adjacent to a Superfund site called St Louis FUSRAP sites. Here's some basic info on the St. Louis FUSRAP sites:

Superfund Site Name: St Louis FUSRAP Sites

Alias: SLAPS/St Louis Airport Sites/Hazelwood Interim Storage Site/Latty Ave/Futura Coatings Company

Listed on the NPL: Yes

EPA ID: MOD980633176

Site History: The St. Louis Airport/Hazelwood Interim Storage/Futura Coatings Co. site is comprised of numerous properties located in two distinct areas. The St. Louis Downtown Site (SLDS) is located at the Mallinckrodt Chemical Plant in downtown St. Louis, and the North County sites are located near the Lambert International Airport. The North County sites include the St. Louis Airport Site (SLAPS), the Hazelwood Interim Storage Site (HISS), and various vicinity properties. Uranium ores were processed at the downtown site from 1942 to 1957 under contracts to the Manhattan Engineering District (MED) and later the Atomic Energy Commission (AEC). The transfer of process residues from downtown to sites near the Airport resulted in the contamination of numerous private and municipally owned properties.

The St. Louis radioactively-contaminated sites are part of the Formerly Utilized Sites Remedial Action Program (FUSRAP) established by Congress in 1974 for the AEC to address the cleanup of formerly used properties contaminated as a result of historic nuclear weapons production. The U.S. Department of Energy, successor to the AEC, managed the FUSRAP until October 1997 when responsibility for the cleanup was transferred to the U.S. Army Corps of Engineers (USACE).

EPA Project Manager: Matthew Jefferson (913) 551-7520

EPA Community Involvement Coordinator: Ben Washburn (913) 551-7364

Dan can provide you the specifics on the Westlake Landfill. Let me know if you need anything else.

Best,

Matt

Matthew Jefferson

Superfund Remedial Project Manager

EPA Region 7 - Kansas City

(913) 551-7520

(913) 551-9520 (fax)

**From:** Curry, Tim
**Sent:** Wednesday, February 20, 2013 4:06 PM
**To:** Stapleton, Jeff; Gravatt, Dan; Jefferson, Matthew
**Subject:** RE: St. Louis Survey

Dan and Matt,

Jeff Stapleton will be processing the data and producing the report. If you could help him out with his questions that'd be great. We can talk some more about the data products but from what we discussed previously a sigma plot (standard deviations color coding) for isotopes of interest, a contour plot to interpolate between data points (both total counts and by isotopes of interest), aerial photos and Infrared imagery (including a thermal contouring). The data will be provided in the report but will also be made available on a Google Earth link for easy viewing.

**From:** Stapleton, Jeff [mailto:jeff.stapleton@kalmancoinc.com]
**Sent:** Wednesday, February 20, 2013 2:55 PM
**To:** Curry, Tim
**Subject:** St. Louis Survey

Hey Tim,

I am trying to get a leg up on the report for the St. Louis area survey. Do you have any particulars you can share? I'm interested in the actual site name, the Region 7 contact name and title and any site history. (I can probably get that from the CERCLIS database assuming this is a declared Superfund site). Anything you have that you think would help would be appreciated.

Also, do you know what products we want to give them?

Thanks,

Jeff